

# Chapter One

## **Participation Matters** **Governing Ozone Depletion and Climate Change**

The US desires an integrated climate change treaty, “designed to involve all nations and dynamically reflect and incorporate each nation’s unique circumstances into the development of a truly global response strategy.”

—Testimony of Richard Morgenstern,  
Deputy Assistant Administrator  
U.S. EPA, 1991

With the Bush administration on the sidelines, the world’s leading countries hammered out a compromise agreement today finishing a treaty that for the first time would formally require industrialized countries to cut emissions of gases linked to global warming. The agreement, which was announced here today after three days of marathon bargaining, rescued the Kyoto Protocol, the preliminary accord framed in Japan in 1997, that was the first step toward requiring cuts in such gases. That agreement has been repudiated by President Bush, who has called it “fatally flawed,” saying it places too much of the cleanup burden on industrial countries and would be too costly to the American economy.

—*New York Times*, 24 July 2001

## WHAT DOES IT MEAN TO BE GLOBAL?

Notwithstanding a common misconception, *global* is more than a place and it is more than a mere description of the extent or scope of an environmental problem. Modifying environmental problems with the adjective “global” is generally shorthand for expressing that the problem is beyond the control of individual nation-states, that it constitutes something new in the international arena, and/or that it will require international collective action if we are to solve it. The label “global” conveys the very characteristics that make global environmental governance both fascinating and challenging.

The label “global” also signifies important ideas about participation in governance processes aimed at solving a given problem. To say “a *global* response” or “a *global* solution” implies answers to the crucial question: Who should participate? Conventionally, invoking the global label implies that all states should participate in governance processes—universal participation. The idea of universal participation is, in fact, so embedded in our analyses and consciousness that it is rarely questioned or examined when considering problems such as ozone depletion or climate change; it is simply a *de facto* characteristic of these problems.

This is curious. Across *global* environmental problems, there has been a wide diversity of participation requirements and understandings. Far from exhibiting a single and obvious way to approach environmental problems with geographically expansive scope, participation in governance processes is actually a contested and inherently dynamic concept. A review of the environmental problems featured in this analysis, ozone depletion and climate change, makes it abundantly clear that these *global* environmental problems have required *different* levels of participation over time.

The configurations of actors that composed the necessary *global* responses have been far from stable in the ozone depletion and climate change issues. Before 1987, the *global* ozone depletion problem only required the participation of between twenty-five and thirty, mostly Northern states in governance processes.<sup>1</sup> By 1990, the international community understood the ozone depletion problem to require *universal* participation, and more than 100 states participated in governance activities through the 1990s. Also in 1990, at the very beginning of the formal negotiations, *global* climate change required universal participation. However, eleven years later this understanding came under assault with the U.S. withdrawal from the Kyoto Protocol process. Even cursory observation uncovers two major transitions in required participation levels for these global environmental problems:

- A transition from global meaning North-only to global meaning universal participation occurred during the ozone depletion negotiations after 1987. The latter understanding of global envi-

ronmental problems locked in throughout the international community and significantly shaped states' understandings of climate change. Universal participation thus defined participation requirements for the early climate change governance processes, which culminated in the Framework Convention on Climate Change (FCCC) in 1992.

- Contestation over the meaning of universal participation erupted in the wake of the FCCC negotiations and two divergent understandings of a global response emerged. One side argues that universal means that all states should participate in the negotiations, but that Northern states should take the first concrete actions toward mitigation of the problem (North First). The other side argues for binding commitments for all participants (Universal Commitment).

Clearly, the global response to ozone depletion and climate change has changed over time as the international community's understanding of participation requirements in governance processes has changed over time. This book seeks to explain this evolution by examining the global governance process in both the ozone depletion and climate change issues. I focus dually on the most important state in both issues—the United States—as well as on the international community as a whole. Two sets of questions compose the driving puzzles and frame the analysis of the book:

- How can we account for changing U.S. positions on participation in the ozone depletion and climate change negotiations from 1985 to the present represented by the epigraphs that begin this chapter? Why did the United States come to accept/advocate for universal participation in the late 1980s and then (apparently) reject universal participation by withdrawing from the Kyoto process in 2001?
- Why do we see variations in participation requirements in the international community from 1985 to the present?

The questions can be distilled into a single concern: Who participates in governance activities? Answering this question is more than an academic exercise. How actors in the international community understand the answer is of vital importance as participation requirements are at the foundation of global governance processes. How states understand the global response sets boundaries on governance processes shaping actors' definitions of the problems, actors' negotiating strategies, the debates that emerge, and ultimately, the outcomes achieved. It is impossible to give a full accounting of the governance of either ozone

depletion or climate change without explaining how participation requirements have changed over time and how they have shaped the governance processes.

Unfortunately, the literature on environmental politics, global governance, and international relations has paid too little attention to questions of participation. The level of participation required for specific issues and negotiations is often assumed and taken for granted, rather than explained. Ignoring this facet of the governance of ozone depletion and climate change is a mistake. The governance of these issues cannot be separated from fundamental understandings of who should participate<sup>2</sup> and thus neither can our explanations of governance be separated from an explanation of participation.

In the pages that follow, I draw upon social constructivist thought and insights from the study of complex systems<sup>3</sup> to develop an explanation for the dynamic meaning of global—how and why the United States and the international community’s understandings of required participation have changed over time. In so doing, I develop a full picture of the governance of these issues. I demonstrate that participation is socially constructed by the adaptive actors that participate in the governance processes. Understandings of who should participate are governed by international social norms that emerge through the actions and interactions of such actors. The analysis details the dynamic transitions in participation requirements as well as the effects that those requirements had (and continue to have) on the governance of these issues.

I demonstrate that Mostafa Tolba, the executive director of the United Nations Environment Program (UNEP), emerged as a norm entrepreneur in the ozone depletion negotiations in the 1980s. Tolba advanced the novel understanding that ozone depletion required universal participation. This idea became a social norm and spread through the international community, becoming locked in and taken for granted between 1987 and 1990. When the climate change negotiations began in the early 1990s, the international community drew upon the internalized norm of universal participation in defining climate change. However, universal participation is open to numerous interpretations. In the 1990s, contestation over the meaning of universal participation, spurred by U.S. entrepreneurial efforts, would signal another transition in participation requirements. In short, I explain how evolving participation requirements emerged and how they influenced U.S. strategies and behaviors, as well as the debates and outcomes of the governance processes—how participation requirements changed over time and why participation matters.

Explaining evolving participation requirements and demonstrating why participation matters, also contributes to a larger project—developing a new way to approach global governance itself. By focusing on foundational social norms and utilizing a complex systems perspective, this

book offers a novel way to navigate the complicated terrain of global governance. A combined social constructivist and complex systems approach proves useful for explaining the specific empirical pattern of evolving participation requirements and is thus potentially useful for a diverse range of global governance issues in environmental politics and beyond.

The rest of this chapter serves to set the stage for the story of participation in ozone depletion and climate change. I first address global governance and my approach to it, examining the concept of global governance, the importance of social norms, and the justification for focusing on participation. I then focus on the empirical pattern under investigation—dynamic notions of a global response. This section provides an overview of the governance of ozone depletion and climate change and details the transitions in participation requirements in the last two decades. The third section elaborates on the norms-based arguments and provides an overview of the steps in the analysis.

## APPROACHING GLOBAL GOVERNANCE

### *Global Governance*

This study is explicitly concerned with the global governance of ozone depletion and climate change. Unfortunately, a statement like that often conveys very little information as many global governance studies begin with a standard apology or criticism:

The rubric of “global governance” is akin to “post-cold war,” which signifies that one period has ended but that we do not as yet have an accurate short-hand to depict the essential dynamics of the new epoch.<sup>4</sup>

Far from becoming clearer with use, it [governance] currently serves as a catchall term sometimes associated with the notion of “regime,” sometimes with the concept of ‘global order’ . . .<sup>5</sup>

A cottage industry has emerged in the literature dedicated to defining global governance, decrying the lack of definition, or critiquing the entire global governance enterprise.<sup>6</sup> Multiple pages could be filled by merely listing the definitions and critiques that abound in the literature. Suffice it to say that there are as many definitions of global governance (GG) as there are perspectives on world politics.

Fortunately, the conceptual clutter that surrounds GG is not impenetrable and it is possible to identify what an analysis of global governance entails. At the risk of oversimplification, all definitions have to have two aspects: form and process.<sup>7</sup> The first aspect is GG as a noun—something

to be achieved: control, government, management, solutions to a problem, rule systems, norms, or projects. The second aspect is GG as a verb—the process that leads to achievement (or not) of global governance (as noun, however conceived). In other words, all definitions of global governance must include (implicit or explicit) understandings of structure and process. Therefore a broad definition is possible:

Global governance consists of the processes through which rules (broadly conceived) are constructed, maintained, and changed in political spaces that lack central authority.<sup>8</sup>

It is clear that global governance studies are concerned with how patterned behavior is achieved in anarchic political spaces—with the emergence of rules, be they treaties, bilateral agreements, multilateral agreements, international customary law, or norms. Further, the emphasis of study is the *processes* that lead to or influence the emergence of these patterns. In this study, I focus explicitly on how the “global” in global governance has been constructed in ozone depletion and climate change, and the effects that this has had on the form of governance achieved for these two problems. I explain how rules governing participation emerged and changed over time, and how they influenced a more conventional form of governance—multilateral agreements.

### *Global Governance, Norms, and Complex Systems*

The approach developed in this book is explicitly social constructivist. Thus, the primary focus is on the social construction of the context for more traditional GG activities. My focus is on the socially constructed conditions that provide the contours for multilateral negotiations.<sup>9</sup> Social norms provide definitions of the issues involved. They shape what actors consider to be appropriate courses of action and possible outcomes. My approach to GG thus begins by explaining the conditions that enable and constrain more concrete governance activities—bargaining among states, institutional effects of the UN and other international organizations, and influence of non-state actors. I assume that a full accounting of these latter activities is predicated on a full understanding of the development and evolution of the norms at their foundation. Further, the analysis developed in the chapters that follow demonstrates that “successful” governance requires a solid normative foundation—intersubjective agreement on the appropriate global response.

Grasping foundational social norms requires an explanatory framework that allows for the dynamic interaction of the rules of GG (social norms in this case) and the interests/values of the actors involved.<sup>10</sup> Such a framework is not restricted to constructivism. Recent, self-labeled GG and “Governance without Government” theorists attempt to incorporate such

interactions. They stress the complex emergence of rule-systems driven by the actors in the system, who are, in turn, evolving as they experience life in the system.<sup>11</sup>

Though impressive theoretical and empirical strides are evident in both GG and constructivist studies, they too often lack explicit frameworks that link rules and actors. Their explanations of the emergence and evolution of social norms at the foundation of GG activities can be enhanced by adopting a complex systems perspective (detailed explicitly in chapter 3). The study of complex systems, or complexity theory, provides a set of ideas and insights about the mechanisms through which agents interact with their environment, changing both in the process.<sup>12</sup> Bringing a complex systems perspective together with social constructivism facilitates a full accounting of the development and evolution of foundational social norms, readily applicable to the participation norms that are the empirical target of this analysis.

### *Global Governance and Participation*

Participation norms shape the boundaries for the GG of ozone depletion and climate change in important ways and thus need to be included in our analyses.<sup>13</sup> First, very simply, explaining the concrete governance activities for ozone depletion and climate change requires a prior understanding of participation requirements. Though rarely negotiated formally, participation norms provide the foundation for other governance processes—multilateral bargaining especially—shaping the governance agenda, the actors' strategies/behaviors, and the outcomes. The level of participation associated with the label global influences who sits at the negotiating table, what issues are discussed, and thus how global governance structures ultimately evolve. Two implications are crucially important:<sup>14</sup>

- Development concerns (Right to Development, Financial and Technological Transfer) have always been a part of U.S. negotiating positions for climate change as well as an important component of the international community's agenda. The United States began the climate change negotiations with an understanding that development would be linked to the climate change negotiations. However, this linkage cannot be explained without referring to a prior understanding of universal participation. Without a universal participation norm in place, Southern states did not have the bargaining leverage necessary to force this linkage. Instead, it is attributable to the universal participation norm and precedent set in the ozone depletion negotiations.
- The United States has often been criticized for failing to pursue significant actions to curb climate change the problem. U.S.

recalcitrance in the late 1980s as well as today is an immutable fact—the United States has not been a climate leader. However, what was clear throughout the early climate change negotiations that led to the FCCC, as well as the latter post-Kyoto Protocol negotiations was that U.S. stalling, delaying, and obstinate strategies were all based on a prior understanding of climate change as a problem requiring universal participation. Universal participation has been at the foundation of the debates between the United States and the EU and between the United States and South.

Second, explaining, rather than assuming, participation requirements avoids the tendency to reify current or obvious understandings of the problems being addressed. Today's obvious notions of a global response, such as universal participation, have not always been the obvious way to approach global environmental problems such as ozone depletion and climate change—a number of environmental problems with a global scope were approached with less-than-universal negotiations. In addition, obvious approaches may not be the best approaches.

Third, “obvious” requirements or phenomena in world politics always need to be explained as they inevitably cease to be obvious eventually. For instance, if we are to understand how the climate change negotiations might change course (an especially pertinent concern given the second Bush administration's turn away from multilateral approaches) we need to understand how participation requirements evolved to that point.

Governance processes are always wrapped up with participation requirements, and ozone depletion and climate change are no exceptions. If we hope to explain the GG of these problems, both historically and as they unfold today, we must firmly grasp the dynamic evolution of participation requirements.

#### PARTICIPATION IN OZONE DEPLETION AND CLIMATE CHANGE

Ozone depletion and climate change<sup>15</sup> were the first global atmospheric problems to confront the international community—global in the sense of the scope of the problems. They are similar problems in that they are caused by anthropogenic emissions of gases, but vastly different in their complexity and in the difficulty of achieving solutions. They have been joined together in the public imagination (often being confused for one another), and the governance of ozone depletion is often discussed as a precedent for the governance of climate change.<sup>16</sup> To set the stage for my arguments about participation, this section provides a broad overview of



ozone depletion and climate change—how the international community came to understand these problems and how it has dealt with them.

### *Global Environmental Problems and Participation*

Ozone depletion and climate change are significant entries on the growing list of international or global environmental problems that the international community has recognized in the last three decades. Since the 1970s, a number of environmental problems have been labeled international or global—acid rain, decline in whale populations, seabed mining/ocean pollution, biodiversity loss/endangered species, and trade in toxic waste among others. These problems are among the most daunting and important issues facing the international community. They span boundaries and thus do not fit well into a system of states defined by sovereign borders. Solving the problems thus inherently requires collective action.

The international community has attempted the necessary collective action or global response in numerous ways since global or international environmental problems rose to prominence: the International Whaling Commission, the Convention on International Trade in Endangered Species, Law of the Sea, the Basel Convention (Hazardous Waste), Law of the Sea, and the Montreal Protocol on Ozone Depleting Substances, to name a few. These agreements and conventions represent the diverse approaches for addressing global environmental problems—extant approaches run the gamut from bilateral agreements, to small-scale multilateral agreements (among mostly Northern states or only among the states that contribute to the problem), to large-scale multilateral negotiations that approached universal participation. There was no *obvious* way to approach global environmental problems, and yet in the 1980s and 1990s, the international community locked in to universal participation as the appropriate way to address ozone depletion and climate change and other global environmental problems.<sup>17</sup>

### *Lock-in Around Universal Participation*

The story of the lock-in around universal participation begins with the international community's efforts to address ozone depletion—and the transition that occurred in 1987. The context for this transition was the initial recognition of the problem and the initial North-only participation requirements at the foundation of early governance efforts.

Ozone depletion is caused by a simple reaction of ozone molecules and the chlorine found in a certain class of chemicals, the most important of which are chlorofluorocarbons (CFCs).<sup>18</sup> In essence, chlorine breaks ozone molecules and starts a chain reaction that can last for years. This chemical reaction is of interest because stratospheric ozone absorbs the ultraviolet (UV) part of solar radiation. UV radiation causes skin cancer and can severely damage plant life. Thus, a thin layer of ozone molecules

protects humanity from skin cancer and agricultural catastrophe—a layer under siege from synthetic chemicals.<sup>19</sup>

The potential for ozone depletion was recognized in the 1970s and caught the imagination of the international scientific community. Numerous studies were undertaken in the late 1970s and early 1980s, designed to ascertain if ozone depletion was happening and if CFCs were the culprit. The sense of urgency exploded in 1985 when the British first discovered the Antarctic ozone “hole”—a significant thinning of the ozone layer or drop in the ozone levels (up to 30 percent).<sup>20</sup> This was the first confirmation that indeed the ozone layer was being depleted—though, crucially, this discovery did not prove the hypothesized connection between ozone depletion and CFCs.

However, the evidence for this connection began to accumulate. In 1986 a NASA/World Meteorological Organization (WMO)/United Nations Environment Programme (UNEP) report found that the concentrations of the two most important CFC chemicals (CFC 11, CFC 12) had doubled between 1975 and 1985, and they confirmed that these chemicals were long-lived in the atmosphere.<sup>21</sup> Finally, in March 1988, the Ozone Trends Panel, a NASA-sponsored group of international scientists, concluded both that the ozone layer was being depleted and that CFCs were the cause.<sup>22</sup> From this point forward, the scientific questions became how much depletion, how fast, and what could be done to stop and reverse the depletion; the debates surrounding the ozone-CFC connection evaporated.

The political response to ozone depletion that paralleled the scientific activities was not recognizable as a “global” response in the way that we think of global responses today. Universal participation was certainly not obvious when the international community began to address this global environmental problem. Between 1977 and 1987 international efforts to address the depletion of the ozone layer only required the participation of Northern states. Early responses to ozone depletion came from only a handful of states.

Spurred on by the ozone depletion theory, the United Nations Environment Program’s (UNEP) governing council called for an international meeting to address ozone depletion in 1976. A World Plan of Action was the result—a plan that called for further study.<sup>23</sup> The United States, Canada, Finland, Sweden, and Norway (the Toronto Group) did call for international regulations. In addition, spurred by domestic political pressure, the United States was the first to take regulatory action: In 1977 an ozone protection amendment was added to the Clean Air Act and in 1978 the United States banned CFCs in nonessential aerosols.<sup>24</sup> The international community as a whole, however, was not ready for such quick action, and at the second intergovernmental meeting on regulating CFCs in 1978, governments even rejected coordinated, voluntary CFC cutbacks.<sup>25</sup>

The real momentum for international action began in the early 1980s due to the work of UNEP. In 1980, UNEP called for international reductions in CFCs, and then in 1981 they sponsored the first multilateral negotiations on the ozone depletion problem. In 1982, UNEP convened the negotiations for what would become the Vienna Convention—the Ad Hoc Group of Legal and Technical Experts for the Protection of the Ozone Layer. These negotiations would last for roughly three years and they produced the Vienna Convention in 1985. This convention called for further study and, most importantly, for the negotiation of a series of protocols to reduce CFC use. There were four rounds of protocol negotiations in 1986 and 1987, culminating in the adoption of the landmark Montreal Protocol in September 1987.

With few exceptions, Northern states negotiated the Vienna Convention and the Montreal Protocol, two landmark ozone depletion agreements. In fact, fewer than thirty-five states (over two-thirds Northern) attended each of the three rounds of negotiations leading up to the Montreal session.<sup>26</sup> As Southern states were not important CFC producers, their participation was not seen as required and they did not participate. Most of the negotiations took place between the United States and European nations. However, a striking change occurred at Montreal in 1987. Southern states began to participate in large numbers for the first time (thirty-seven of the fifty-seven state participants were Southern). It was thus at Montreal that universal participation first began to emerge as a serious potential participation requirement. The transition in participation, signaled by the Southern attendance at Montreal, would soon transform how the entire international community viewed global responses to environmental problems.

An important aspect of the Montreal Protocol was the notion of continual review and renegotiation. As such, after the Montreal Protocol entered into force in January 1988, subsequent meetings of the parties served to modify and enhance the protocol. Universal participation quickly rose to prominence during these post-Montreal Protocol meetings and this new requirement significantly shaped the governance of ozone depletion. Southern states were now actively participating in large numbers and development issues began to dominate the agenda. Ninety-six states (sixty-one Southern) participated in the 1990 London Amendment meetings—the most important post-Montreal session.<sup>27</sup> After London, many developing nations signed the protocol, and it became an agreement of global scope. Universal participation now defined ozone depletion, a development that would have ramifications for how the international community addressed climate change.

Universal participation emerged in the ozone issue. It locked in during the climate change negotiations. Influenced from the very beginning by universal participation, the climate change negotiations followed a

different trajectory. When the international community first began to address climate change in 1990, confronting this *global* environmental problem already required universal participation—the international community had locked in to universal participation. This understanding shaped how the international community came to define the problem and address it.

Climate change results from the greenhouse effect whereby various gases (carbon dioxide, methane, CFCs, water vapor, and others) absorb solar radiation that would otherwise be reflected back into space from Earth. This greenhouse effect itself is not a problem—it keeps the planet warm and allows life to flourish in the forms we are familiar with. The carbon dioxide and other gases in our atmosphere that form the greenhouse keep the earth thirty-four degrees centigrade warmer than it would be in absence of substantial carbon dioxide levels.<sup>28</sup> The greenhouse effect potentially becomes a problem because of the effects from anthropogenic emissions of carbon dioxide and other gases in the last 150 years. Emissions since the Industrial Revolution, and especially in the last fifty years, have caused dramatic increases in atmospheric concentrations of carbon dioxide—most arising from the burning of fossil fuels. Though the effects of changes in carbon dioxide concentrations are not fully understood, most scientists agree that warming will occur and that warming has the potential to alter climatic patterns—melting polar ice caps, affecting everyday weather, increasing the frequency and severity of storms, and altering long-standing temperature patterns.<sup>29</sup>

Although the greenhouse effect was well known for more than one-hundred years, climate change did not become an urgent matter on the world scientific agenda until the late 1970s—part of the same awakening to global environmental problems that catalyzed scientific interest in ozone depletion. In 1979, the WMO sponsored the First World Climate Conference where they confirmed the plausibility that burning fossil fuels and deforestation could lead to warming and that such warming could have broad ramifications.<sup>30</sup> In 1985 scientists again came together under WMO auspices in Villach, Austria. A consensus emerged surrounding the notions that anthropogenic sources were causing increases in atmospheric carbon dioxide concentrations and that this could raise the surface temperature of the earth.

The political response to climate change is not easily distinguishable from the scientific response. In 1988, the political response began with the formation of the Intergovernmental Panel on Climate Change (IPCC). This UN-sponsored group was designed to come up with the definitive statement on the science of climate change as well as explore potential policy responses to it.

The IPCC's first report was ready in 1990 and was the foundation for the international negotiations to address climate change. The report

found with certainty that human activities are “substantially increasing the atmospheric concentration of the greenhouse gases.”<sup>31</sup> In addition, the IPCC was confident that climate change is a long-range problem because of the atmospheric lives of the gases involved, such that “immediate reductions in emissions from human activities of over 60% [are needed] to stabilize their concentrations at today’s levels.”<sup>32</sup> The uncertainties that the IPCC was unable to eliminate included questions about the predictions with regard to, “the timing magnitude and regional patterns of climate change.”<sup>33</sup> In the end, the document, “reaffirmed that global warming is a serious threat,” but did not present definitive proof of the mechanisms of climate change or the potential effects caused by anthropogenic emissions.<sup>34</sup> A 1989 ministerial meeting in the Netherlands began the international political process in earnest, and in 1990, the WMO and UNEP convened the Second World Climate Conference (SWCC). Soon after the SWCC and the publishing of the reports of the IPCC working groups, the UN created the Intergovernmental Negotiating Committee (INC) for Climate Change and charged it with negotiating a framework convention for climate change. The INC process took two years and encompassed five sessions leading up to the UN Conference on Environment and Development (UNCED—the Earth Summit) in 1992 where the Framework Convention on Climate Change (FCCC) was signed.

In contrast to the initial ozone depletion negotiations, more than one hundred states attended each of the negotiating sessions that culminated in the Framework Convention on Climate Change.<sup>35</sup> Universal participation was part of the international community’s fundamental understanding of climate change. Everyone knew that all states should participate in the negotiations and most states did participate. The participation of the global South from the very beginning meant that development was an early and crucial aspect of the negotiations, where in the ozone negotiations development concerns came much later. In addition, the negotiations were much broader both because the nature of climate change is more complex, and because of the greater number of voices (and interests) in the negotiations.

These are remarkably different paths for two global atmospheric problems to take and the brief descriptions illustrate the very *recent* transition in the required level of participation in efforts to cope with these “global” environmental problems. In December 1986, only twenty-five states attended the first round of the ozone protocol negotiations. In contrast, in February 1991, more than one hundred states attended the first negotiation for a climate change convention. In four short years, the international community switched from a small-scale, North-only multilateral approach for the ozone depletion problem to requiring universal participation for both ozone depletion and climate change.

*Evolution of Universal Participation—the Continued Climate Change Debate*

While ozone depletion was considered to be on the way to solution in the 1990s—with international consensus achieved, the Montreal Protocol and its amendments have been the most successful governance outcome in global environmental politics—the FCCC was only the barest first step in the governance of climate change. The lock-in around universal participation that shaped the FCCC negotiations remained in place through the 1990s. Universal participation overtly shaped the post-FCCC negotiations in that development remained a key aspect of the debate, the G-77 was a powerful negotiating voice, and equity concerns were of primary importance. The fact that all countries were around the table put all kinds of issues *on* the table (just as they were at Rio). The initial conditions of the late 1980s and early 1990s put the climate change regime on a path that constrained potential outcomes and governance processes.

However, the influence of universal participation was more nuanced through the 1990s as the implications of universal participation evolved and the international community diverged in its understanding of participation requirements. In the post-FCCC negotiations, different variants of the universal participation norm came to be at the foundation of the debates in the Kyoto negotiations and beyond. Normative contestation over the implications of universal participation is driving the evolution of both the universal participation norm and the governance activities in the climate change issue.

Like the ozone agreements, the FCCC was designed to be flexible and evolve over time. Also, following the ozone depletion precedent of the Vienna Convention of 1985, the FCCC was merely a statement of principles that called for the negotiation of specific protocols to instantiate those principles. These negotiations took place at several conferences of the parties (COP) throughout the 1990s, the culmination of which was the Kyoto Protocol, ultimately negotiated and signed in 1997. Subsequent COPs have addressed the details left ambiguous in the Kyoto Protocol. While numerous debates flowed through these negotiations, participation played a crucial role and shaped the entire course of the negotiations in the 1990s. While all states understood climate change to require universal participation, different interpretations of this requirement emerged. Universal participation thus shaped what was taken for granted (all states should participate, development is a crucial issue) as well as what was debated (how states should participate).

During and after the FCCC negotiations, the Southern states (G77 + China) and Europe steadfastly adhered to an interpretation of universal participation that held that Northern states should take the first action and Southern states would follow at a later date (North-first variant). This understanding flowed directly from the two-track proceeding in the

ozone depletion negotiation and was also justified by moral (polluter pays) arguments about the historical responsibility of Northern states for the problem. The United States came into and left the FCCC negotiations with a different interpretation of the universal participation norm. The United States held that universal participation entailed concrete actions by all parties (universal commitment variant). This understanding did not emerge fully formed during the FCCC negotiations, where the United States was most concerned with holding off the EU and its insistence on binding emissions targets, but it would come to dominate U.S. positions in the subsequent years. In addition, this understanding itself was not homogeneous throughout the U.S. government or over time.

The differences over the ultimate meaning of universal participation were at the foundation of a (if not the) key debate throughout the negotiations—developing country commitments. Evolving participation requirements thus fundamentally shaped the recent climate change governance efforts by catalyzing a debate over the meaning of participation—participation in the process or participation in the commitments.

#### MOVING FORWARD: OVERVIEW OF THE ARGUMENT

Why did ozone depletion start out as a North-only problem and come to require universal participation? Why did climate change require universal participation from the very beginning? Why have variants arisen in the understanding of universal participation? How does participation matter? This book answers these questions by broadly examining the ozone depletion negotiations from 1985 until 1990 and the climate change negotiations between 1988 and 2004 and specifically focusing on United States negotiating positions, strategies, and behavior. As mentioned, the argument draws upon the insights of social constructivism and complexity theory, and the argument is evaluated through both formal models and case study analysis.

#### *Norms and Participation*

The argument that unfolds throughout the course of the book claims that ozone depletion and climate change went “global”—came to require universal participation—through processes of social construction and complex adaptation. Specifically, I argue that a norm requiring universal participation emerged in the midst of the ozone depletion negotiations and came to significantly influence the manner through which the international community perceived and addressed climate change. Climate change required universal participation from the very beginning because of understandings of *appropriate* participation generated in the ozone depletion negotiations. In turn, contestation over the nature of appropriate participation through the 1990s has driven further evolution of the universal participation norm.

This argument hinges on the claim that the level of participation in negotiations to address environmental problems is an inherently political (rather than scientific) issue, molded by normative understandings. In other words, the number and identity of participants are not obvious or objectively known, rather, adaptive actors construct suitable participation requirements through their interactions.

Deciding on appropriate actions and even who should be at the table to address a problem is always a contentious process; it is not objectively informed by the characteristics of a problem, or decided through strategic choices. Obvious definitions are constructed notions and must be understood within a historical context.<sup>36</sup> Constructivism is thus the natural approach because it explicitly focuses on the process whereby social norms and political actors interact. It is concerned with how political actors create social norms and how those social norms shape the actors' identities, interests, and behaviors. In addition, social constructivism is ideal for explaining how the evolving universal participation norm influenced the governance of ozone depletion and climate change because of its attention to the ways in which social norms structure the opportunities and constraints for international politics.

The key for the constructivist explanation for the lock in around universal participation is the connection between ozone depletion and climate change. Both scientists and policymakers alike designated both problems to be global in scope. However, while the scientific designation of global remained stable over time, the definition of a global response has evolved over time. In essence, when policymakers called ozone depletion a global environmental problem in 1983 a different set of responses was implied than in 1989. Before 1987 the negotiations to address ozone depletion only required the participation of OECD nations. After Montreal, the next global environmental problem on the agenda—climate change—required universal participation. Participants in the negotiating process have observed the link between the ozone depletion negotiations and subsequent perceptions of climate change highlighted in the constructivist explanation. Paul Horwitz of the U.S. EPA perhaps stated it best when he noted that after Montreal there was a sea change in how environmental issues were viewed: "You could not now have an environmental negotiation on any issue and only have 25–30 countries around the table."<sup>37</sup> The constructivist claim is that universal participation was a U.S. commitment in climate change because the ozone depletion experience had changed the way that subsequent, similar global environmental problems were defined and addressed.

The 1990s saw further evolution of the meaning of global, as a once taken-for-granted understanding of global responses (universal participation) was contested. Norms are not permanent, static structures—even internalized ones. There is space for slippage in norms—not every actor will



have the same understanding of what the norm requires. This leads to norm contestation. In the case of climate change, while all states internalized the requirement of universal participation, not every state had (or has to this day) the same understanding of this norm. Two variants emerged in the FCCC negotiations and these variants defined crucial debates in the negotiations throughout the 1990s.

### *The Norm Life Cycle and Complexity Theory*

I claim that a social constructivist approach is the best way to explain the puzzle of participation. However, constructivism is not a singular discourse—multiple approaches are comfortable with the label *constructivism*. The perspective I employ is a framework developed by Martha Finnemore and Kathryn Sikkink specifically designed to explore the emergence and evolution of norms—the norm life cycle (NLC).<sup>38</sup> This framework explicitly addresses the emergence and evolution of norms and hypothesizes that norm entrepreneurs are crucial catalysts of norm dynamics.

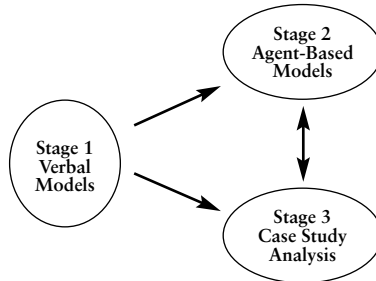
The NLC is a broad-brush view of norm emergence and change. However, alone it is not sufficient to bring the norms-based explanation to life. The NLC lacks a theory of agent action necessary to sufficiently detail the linkage between norms and actors. I turn to complexity theory, or a complex systems approach to fill this gap. Complexity theory provides a clear model of agent action—an adaptive model—that complements the NLC. This adaptive model completes the account of norm emergence and evolution found in the NLC. Integrating the two produces a powerful framework for examining the emergence and influence of a universal participation norm—it provides hypotheses for explaining the dynamic nature of “global” responses to ozone depletion and climate change.

### PROGRESSION OF THE ANALYSIS

The rest of this book serves as an assessment of the claims made in this first chapter, and the analysis proceeds in clear stages. First, it is necessary to justify the need for a norms-based analysis of participation in ozone depletion and climate change. If I used a different theoretical lens, I might claim that universal participation is not a norm at all, but a result of the strategy of powerful actors with given interests, or determined directly by the objective scientific knowledge of epistemic communities. Chapter 2 discusses these alternatives explicitly, and places the argument of this volume into the context of the international relations literature. Not surprisingly, I find these alternative explanations wanting.<sup>39</sup>

The assessment of the constructivist/complex systems perspective on global environmental governance proceeds through three linked stages

**Figure 1.1**  
**Steps of Analysis**



(See Figure 1.1). The analysis begins by building a verbal model of the emergence and evolution of a universal participation norm. It is necessary to theoretically operationalize the norms-based argument. I undertake this task in chapter 3; providing a detailed discussion of the NLC, complexity theory, and the framework that links the two. This chapter fully specifies the norms-based argument and provides a series of empirical expectations/hypotheses for testing the argument. The second stage of analysis is a formal assessment of the verbal model. I simulate the NLC using agent-based computational models drawn from complexity theory. The insights of the norm life cycle are sophisticated, but, unfortunately, as with other constructivist ideas this verbal model has not been formalized because it works from assumptions that do not fit nicely into traditional formal, rational models. Agent-based modeling is a useful tool for formalizing such advanced analytic frameworks because it allows for flexible implementation of assumptions about agents and processes of interaction.

Simulating the verbal framework on a computer formalizes its inherent logic and allows for rigorous assessment of its deductions and conclusions. Agent-based modeling provides a social laboratory to simulate the emergence and evolution of social norms and to generate boundary conditions and further empirical expectations/hypotheses that the verbal model implies. Chapter 4 thus begins telling the story of universal participation by simulating the NLC. The chapter introduces the modeling method, details the model of the NLC, and discusses the implications of the results of the modeling for explaining the dynamic global responses in ozone depletion and climate change.

The third stage of analysis consists of qualitative case study analysis—the subject of chapters 5–7. Armed with empirical expectations and the norm life cycle/complexity theory framework, I turn to the empirical case studies of the ozone depletion and climate change negotiations.

In chapters 5 and 6 I trace the social construction processes that led to the lock-in around universal participation. Chapter 5 chronicles the transition from a North-only participation requirement to universal participation in the ozone depletion negotiations. Mostafa Tolba, director of the United Nations Environment Program (UNEP), emerges as a norm entrepreneur who convinces a critical mass of Southern states to participate in the ozone negotiations. The action of these Southern participants alters the social context for all states, and the United States and others come to accept the appropriateness of universal participation after 1987. Chapter 6 then proceeds to relate the influence of this nascent norm on the climate change negotiations, discussing how the United States internalized the universal participation norm and faced climate change with this understanding. Chapter 7 details the evolution of universal participation and how contestation over the meaning of “global” continues to shape the governance of climate change. These are not three separate case studies that “test” the verbal model. Instead, taken together, they explain/trace the process of norm emergence and evolution, and they demonstrate how participation matters in the governance of ozone depletion and climate change.

## CONCLUSION

In the early 1990s, universal participation became *the* way to address ozone depletion and climate change. After the transition from North-only to universal participation that followed the Montreal Protocol, this underlying definition influenced how states approached the climate change problem. The lock in around universal participation has fundamentally shaped the global governance of these issues. Because of universal participation, development issues have been at the forefront of the discussions and the negotiations have taken place under a very large spotlight—the whole world is watching and participating. In ozone depletion, universal participation has led to tremendous success—the Montreal Protocol process will potentially solve the ozone depletion problem this century. In climate change, the results of universal participation have been mixed. There have been positives in that universal participation makes climate change a very prominent problem and increases the equity of the discussions (if not the results of the negotiations). However, there are potentially negative consequences as well in that the climate change negotiations have been far from efficient, and universality has facilitated stalling by some states opposed to significant actions for reducing global warming. In both cases, however, the governance of these issues has been fundamentally shaped by participation requirements.

What does it mean to be global? The answer is time and context dependent. Clearly collective action is necessary to address the challenges of ozone depletion and climate change. However, if we want to understand and improve global responses we must understand how the participation requirements entailed by the global label have changed over time and influenced governance processes. This book, through computational and qualitative means, explores how adaptive actors constructed an evolving requirement for universal participation and the impact that this process of social construction has had and continues to have on the governance of ozone depletion and climate change.